

Joint Research Centre

Certified reference materials for testing of mycotoxins



Trichothecenes

Code	Material	Certified value
IRMM-315	4-deoxynivalenol (DON) in acetonitrile, 4 mL	$25.1 \pm 1.2 \mu\text{g/g}$
IRMM-316	Nivalenol (NIV) in acetonitrile, 4 mL	$24.0 \pm 1.1 \mu\text{g/g}$
BCR-377	4-deoxynivalenol (DON) in maize flour, 150 g	$< 0.05 \text{ mg/kg}$
BCR-396	4-deoxynivalenol (DON) in wheat flour, 150 g	$< 0.05 \text{ mg/kg}$
ERM-BC717	deoxynivalenol (DON) nivalenol (NIV) in maize, 60 g	$673 \pm 87 \mu\text{g/kg}$ $53 \pm 10 \mu\text{g/kg}$

Zearalenone, Ochratoxin A

Code	Material	Certified value
ERM-AC699	zearalenone (ZON) in acetonitrile, 4 mL	$9.95 \pm 0.30 \mu\text{g/ml}$
ERM-BC716	zearalenone (ZON) in maize, 60 g	$< 5 \mu\text{g/kg}$
ERM-BC717	zearalenone (ZON) in maize, 60 g	$83 \pm 9 \mu\text{g/kg}$
BCR-471	ochratoxin A (OTA) in wheat, 55 g	$< 0.6 \mu\text{g/kg}$

Aflatoxin M₁

Code	Material	Certified value
BCR-423	aflatoxin M ₁ in chloroform, 2.5 mL	$9.93 \mu\text{g/ml}$ (not certified)
ERM-BD282	whole milk powder (zero level), 30 g	$< 0.02 \mu\text{g/kg}$
ERM-BD283	whole milk powder (low level), 30 g	$0.111 \pm 0.018 \mu\text{g/kg}$
ERM-BD284	whole milk powder (high level), 30 g	$0.44 \pm 0.06 \mu\text{g/kg}$

Confidence in measurements

All certificates and detailed production information can be found at <https://crm.irmm.jrc.ec.europa.eu>



Accredited CRM Producer: the JRC-IRMM is accredited to ISO Guide 34:2009 for the production of reference materials under the code BELAC 268-RM

<https://ec.europa.eu/jrc/>



Aflatoxins B₁, G₁, B₂ and G₂

Code	Material	Certified value			
ERM-AC057	aflatoxin B ₁ in acetonitrile, 4 mL	Aflatoxin B ₁	3.79	± 0.11	µg/g
ERM-AC058	aflatoxin B ₂ in acetonitrile, 4 mL	Aflatoxin B ₂	3.80	± 0.08	µg/g
ERM-AC059	aflatoxin G ₁ in acetonitrile, 4 mL	Aflatoxin G ₁	3.78	± 0.13	µg/g
ERM-AC060	aflatoxin G ₂ in acetonitrile, 4 mL	Aflatoxin G ₂	3.80	± 0.07	µg/g
BCR-401R	peanut butter, 100 g	Aflatoxin B ₁	< 0.2		µg/kg
		Aflatoxin B ₂	< 0.2		µg/kg
		Aflatoxin G ₁	< 0.2		µg/kg
		Aflatoxin G ₂	< 0.2		µg/kg
BCR-385R	peanut butter, 100 g	Aflatoxin B ₁	1.77	± 0.30	µg/kg
		Aflatoxin B ₂	0.48	± 0.08	µg/kg
		Aflatoxin G ₁	0.9	± 0.4	µg/kg
		Aflatoxin G ₂	0.30	± 0.12	µg/kg
		Sum aflatoxins B ₁ +B ₂ +G ₁ +G ₂	3.5	± 0.5	µg/kg
BCR-264	peanut butter, 150 g	Aflatoxin B ₁	206	± 13	µg/kg
BCR-262R	defatted peanut meal, 100 g	Aflatoxin B ₁	< 3		µg/kg
BCR-263R	defatted peanut meal, 100 g	Aflatoxin B ₁	17.1	± 2.4	µg/kg
		Aflatoxin B ₂	3.0	± 0.4	µg/kg
		Aflatoxin G ₁	3.0	± 0.5	µg/kg
		Aflatoxin G ₂	0.62	± 0.21	µg/kg (not certified)
		Sum aflatoxins B ₁ +B ₂ +G ₁ +G ₂	23.7	± 2.5	µg/kg (not certified)
BCR-375	compound feed, 50 g	Aflatoxin B ₁	<1		µg/kg
ERM-BE375	compound feed, 150 g	Aflatoxin B ₁	2.6	± 0.4	µg/kg
		Aflatoxin B ₂	0.20	± 0.04	µg/kg
		Aflatoxin G ₁	0.40	± 0.10	µg/kg
		Aflatoxin G ₂	< 0.2		µg/kg
ERM-BE376	compound feed, 150 g	Aflatoxin B ₁	12.9	± 1.8	µg/kg
		Aflatoxin B ₂	0.68	± 0.10	µg/kg
		Aflatoxin G ₁	5.2	± 0.8	µg/kg

How to order reference materials

From JRC in Geel

Tel.: +32 14 571 705 • Fax: +32 14 590 406 • <https://ec.europa.eu/jrc/en/reference-materials> • E-mail: jrc-irmm-rm-distribution@ec.europa.eu

From authorised distributors

LGC Standards GmbH (DE)
<http://www.lgcstandards.com/>
 E-mail: de@lgcstandards.com

Sigma-Aldrich RTC Inc. (USA)
<http://www.RT-Corp.com>
 E-mail: RTCSalesgroup@sial.com

Industrial Analytical (RSA)
<http://www.industrialanalytical.co.za>
 E-mail: info@industrialanalytical.co.za

Sigma-Aldrich Chemie GmbH (CH)
<http://www.sigmaaldrich.com/irmm>
 E-mail: flukatec@sial.com

ARMI (USA)
<http://www.armi.com>
 E-mail: Info@ARMI.com